Course Title	MSc Engineering Management
Final Award	MSc Engineering Management
Interim Awards	Postgraduate Diploma of Higher Education in Engineering Management Postgraduate Certificate of Higher Education in Engineering Management
Awarding Body	Ravensbourne University London
Teaching Institution	Ravensbourne University London Franchise partners
UCAS Code	Not applicable
HECOS code (with Subject percentage Splits if applicable)	(*https://www.hesa.ac.uk/support/documentation/hecos*) 📊 annex-a-mapping-of-ldcs-and-hecos-codes-2021.xlsx 100089 Management Studies (50%) 100810 Strategic Management (20%) 101040 Risk Management (10%) 100812 Project Management (20%)
QAA Subject Benchmark	Master's Degrees in Business and Management – March 2023: https://www.qaa.ac.uk/docs/qaa/sbs/subject-benchmark-statement-business-and-management-masters-23.pdf?sfvrsn=3570a881_18
External Accrediting Bodies	CMI
Apprenticeship Standard used to inform the development of the course (if applicable)	*Not applicable* (*https://www.instituteforapprenticeships.org/apprenticeship-standards/?*)
Accelerated Degree Option	☐ Yes ☒ No
Level 6 Top Up Option (online only)	☐ Yes

	☐ No
Study Load	☒ Full-time
Mode of study	☒ Face-to-face ☐
Delivery Location(s)	☒ Ravensbourne University campus ☐ Franchise partners
Length(s) of Course(s)	1 year
Type (open/closed)	Open
Validation period	Five years (September 2025 – September 2030)
Intended First Cohort Start Date	September 2025
Date produced/amended	March 2025
Course Leader	To be confirmed
Course Development Team Members	Core course designers: Dr Kellie Vincent Dr Vaibhavi Chavan Dr Daniel Oladiran
Course Administrative Contact	To be confirmed

Course Description

The MSc (Hons) Engineering Management program is designed for engineers and technical professionals seeking to develop advanced leadership and management skills tailored to the engineering sector. This interdisciplinary course combines core principles of engineering with business strategy, project management, operations, and innovation management. It equips students with expertise in risk assessment, sustainability, leadership, and decision-making, preparing them for senior roles in engineering, manufacturing, construction and technology-driven industries. The program emphasizes real-world applications, integrating case studies, industry collaborations, and research-led learning to bridge the gap between engineering and management excellence.

The MSc Engineering Management program is designed to equip aspiring engineering leaders with the essential skills and knowledge required to navigate the complexities of managing engineering projects and teams in a rapidly evolving technological landscape. This interdisciplinary course combines technical expertise with management principles, preparing graduates to address the challenges faced by modern engineering organisations. The course supports students with the broadest range of interest in engineering contexts including, but not limited to mechanical, civil, environmental, industrial and systems engineering.

Throughout the program, students will engage with a diverse curriculum that covers key areas such as project management, systems design, innovation management, leadership and management and sustainability

practices. The course emphasises practical applications, allowing students to work on real-world projects and case studies that reflect current industry trends and challenges.

Students will benefit from a collaborative learning environment, drawing on the expertise of experienced faculty and industry practitioners. The program encourages the development of critical thinking, problem-solving abilities, and leadership skills, enabling graduates to make informed decisions and drive organisational success.

Key features of the MSc Engineering Management program include:

- Industry-Relevant Curriculum: A comprehensive blend of engineering principles and management strategies tailored to meet the demands of the engineering sector.

- Hands-On Experience: Opportunities for experiential learning through project-based assessments and collaborations with industry partners.

- Personalised Learning: using a competency framework designed to be tailored to individual career goals and aspirations and demonstrate your progress as students transition through the programme.

- Global Perspective: Insight into international engineering practices and management strategies, preparing students for a global career.

Graduates of the MSc Engineering Management program will be well-prepared for leadership roles within engineering firms, consultancy agencies, and technology-driven organizations, equipped to lead projects that drive innovation and improve operational efficiencies.

Course Aims
· 1. To provide students with experience in an engineering environment, offering opportunities to develop a deeper appreciation and critical awareness of engineering management concepts, theories, and techniques, including the application of advanced tools for effective engineering management.
· 2. To challenge students to address complex issues in engineering management systematically and creatively, enabling them to make informed judgments even in the absence of complete data and effectively communicate their conclusions to both specialist and non-specialist audiences.
· 3. To support students in demonstrating their professional competencies across business, technology, and creativity, ensuring they are well-equipped for leadership roles in engineering management.
· 4. To provide students diverse opportunities to work effectively in practical or simulated engineering contexts, allowing them to apply advanced knowledge in a specialized area of engineering management. This includes engagement in real-time simulated project environments or client-based live projects.

Course Learning Outcomes

The course provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **MSc Engineering Management** students will be able to:

Explore	*CLO1 Critically evaluate engineering management concepts, theories, and techniques, demonstrating a comprehensive understanding of advanced tools used for managing engineering processes.* *(This aligns with the exploration of knowledge, concepts, and theoretical frameworks within engineering management.)*
Create	*CLO2 Synthesise complex information to systematically address engineering management challenges, making informed and creative decisions in scenarios with incomplete data, and effectively communicating solutions to both specialist and non-specialist audiences.* *(This focuses on creative problem-solving, innovation, and effective communication in complex scenarios.)*
Influence	*CLO3 Demonstrate professional competence by integrating business, technology, and creativity to address real-world engineering management problems.* *(This outcome highlights the application of interdisciplinary knowledge to solve practical challenges.)*
Integrate	*CLO4 Apply advanced knowledge in a specialised area of Engineering Management by effectively working within a simulated or live project environment, showcasing problem-solving, leadership, and strategic decision-making skills.* *(This emphasizes leadership, decision-making, and influence in real-world project environments.)*

Where a student does not complete the full course, but exits with a Postgraduate Diploma in Higher Education, they will have had the opportunity to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **Postgraduate Diploma of Higher Education in Engineering Management** students will be able to:

Explore	*CLO1 Evaluate engineering management concepts, theories, and techniques, demonstrating a comprehensive understanding of advanced tools used for managing engineering processes.* *(This aligns with the exploration of knowledge, concepts, and theoretical frameworks within engineering management.)*
Create	*CLO2 Synthesise information to systematically address engineering management challenges, making informed and creative decisions in scenarios with incomplete data, and effectively communicating solutions to both specialist and non-specialist audiences.* *(This focuses on creative problem-solving, innovation, and effective communication in complex scenarios.)*
Influence	*CLO3 Demonstrate professional competence by integrating business, technology, and creativity to address real-world engineering management problems.* *(This outcome highlights the application of interdisciplinary knowledge to solve practical challenges.)*
Integrate	*CLO4 Apply knowledge in a specialised area of Engineering Management by effectively working within a simulated or live project environment, showcasing problem-solving, leadership, and strategic decision-making skills.* *(This emphasizes leadership, decision-making, and influence in real-world project environments.)*

Where a student does not complete the full course, but exits with a Certificate of Higher Education, they will have had the opportunity to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **Postgraduate Certificate of Higher Education in Engineering Management** students will be able to:

Explore	*CLO1 Review engineering management concepts, theories, and techniques, demonstrating understanding of advanced tools used for managing engineering processes.* *(This aligns with the exploration of knowledge, concepts, and theoretical frameworks within engineering management.)*
Create	*CLO2 Synthesise information to address engineering management challenges, making informed and creative decisions in scenarios with incomplete data, and effectively communicating solutions to both specialist and non-specialist audiences.* *(This focuses on creative problem-solving, innovation, and effective communication in complex scenarios.)*
Influence	*CLO3 Demonstrate competence by integrating business, technology, and creativity to address real-world engineering management problems.* *(This outcome highlights the application of interdisciplinary knowledge to solve practical challenges.)*
Integrate	*CLO4 Apply knowledge in Engineering Management by effectively working within a simulated or live project environment, showcasing problem-solving, leadership, and strategic decision-making skills.* *(This emphasizes leadership, decision-making, and influence in real-world project environments.)*

Ravensbourne University Assessment Criteria	
CLO1 Explore	Research and Analysis Subject Knowledge Critical Thinking and Reflection Problem Solving
CLO2 Create	Ideation Experimentation Technical Competence Communication and Presentation
CLO3 Influence	Social Impact Ethical Impact Environmental Impact
CLO4 Integrate	Collaboration Entrepreneurship and Enterprise Professional Development

Core Competencies

Each module learning outcome should be aligned to at least one competency.

Competency	Definition	Aligned Assessment Criteria
Cognitive	The ability to acquire, retain and use knowledge, recognise, pose and solve problems. Attributes may include: • Evaluate their own beliefs, biases and assumptions	

	• Evaluate strengths, weaknesses, and fallacies of logic in arguments and information • Apply lesson from the past or learned knowledge and skills to new and varied situations • Perform basic computations or approach practical problems by choosing appropriately from a variety of mathematical techniques • Devise and defend a logical hypothesis to explain observed phenomenon • Recognize a problem and devise and implement a plan of action	**Explore, Create, Integrate, Influence**
Creative	The ability to generate new ideas, express themselves creatively, innovate and/ or solve complex problems in an original way.	**Create**
Professional	The ability to understand and effectively meet the expectations of industry partners, through outputs and behaviours.	**Integrate, Influence**
Emotional, Social and Physical	Emotional -The intrapersonal ability to identify, assess, and regulate one's own emotions and moods; to discriminate among them and to use this information to guide one's thinking and actions and where one has to make consequential decisions for oneself. Attributes may include: • Self-awareness & regulation (including metacognition) • Mindfulness • Cognitive flexibility • Emotional resilience • Motivation • Ethical decision- making Social - The interpersonal ability to identify & understand the underlying emotions of individuals and groups, enhancing communication efficacy, empathy and influence. Attributes may include: • Managing your audience • Coordinating with others • Negotiation • Creativity • People management • Leadership & entrepreneurship • Service orientation • Active listening • Coaching and mentoring	**Explore, Influence, Integrate**

	Physical - The ability to perceive and optimise physiological activity and responses to influence emotion, solve problems or otherwise effect behaviour. Physical intelligence engages the body to train neuron pathways to help change an inappropriate response to an appropriate response. Attributes may include • Self-discipline & management • Attention • Reaction & response time • Cognitive & muscle memory • Managing stress • Physical resilience	
Cultural	The capability to relate to and work effectively across cultures including intercultural engagement, cultural understanding and intercultural communication.	**Influence, Integrate**
Enterprise and Entrepreneurial	The generation and application of ideas within a practical setting. It combines creativity, idea generation and design thinking, with problem identification, problem solving, and innovation followed by practical action. This can, but does not exclusively, lead to venture creation (UK Quality Assurance Agency, Enterprise and Entrepreneurship Education 2018).	**Create, Influence, Integrate**
Digital	The confident adoption of applications, new devices, software and services and the ability to stay up to date with ICT as it evolves. The ability to deal with failures and problems of ICT and to design and implement solutions (Jisc Digital Capabilities Framework)	**Explore, Create, Integrate, Influence**
Ravensbourne Return	Engagement with inhouse activities including mentoring other students, volunteering, acting as a student rep or ambassador. Demonstrate a knowledge of current events and social issues Identify their personal convictions and explore options for putting these convictions into practice Engagement with the external community through (from) employment, volunteering, participation in a Professional Life or other programme-based project.	**Explore, Create, Influence, Integrate,**

Learning, Teaching and Assessment

Learning and Teaching methods	Assessment Strategy
The course employs diverse and inclusive teaching methods to develop theoretical knowledge, practical skills, and critical thinking. It supports various learning styles through interactive and blended learning approaches. Industry engagement enhances real-world application and employability.	As part of the design across all our postgraduate business courses we have applied the following principles: 1. Overarching 5 Cs to be referred to when assessment briefs are designed – commercial, competence,

As part of the design of our teaching and learning across all our postgraduate courses the following principles were applied:

1. Celebrate pedagogy to support business subjects that is not delivered in a lecture theatre

2. Competency framework (RALF) will be used to support personalised learning

3. Design for flexibility – support more student choice and match to competencies demonstrate eg simulation, field trip, consultancy etc for final projects

4. Design for students to be able to intellectually stimulate, build confidence and capability

5. Designed for scalability to support large groups

6. Designed to integrate reality-based learning

7. Designed to increase pass first time rates through the use of confidence building and experiential learning activities that students engage with

8. Provide structured learning support and adaptive learning supported digitally through embedded learning resources used both on campus and in Canvas

Key components of the learning and teaching approach include:
Business Lab Activity: Helps students assess competency gaps using the PG Competency Framework (business, creative, and technological). Development is supported through PSRB-related activities, workshops, and digital tools.
Lectures & Seminars: Deliver core content through interactive discussions.
Active & Blended Learning: Engages students with group work, problem-solving, and online resources like LinkedIn Learning.
Student-Centred Approach & Technology Integration: Encourages independent learning using LMS and collaborative platforms.
Real-World application & Industry collaboration: Corporate sponsors validate assessments, support the PG Competency Framework, provide industry insights, and participate in competitions.

collaboration, creative commitment, compassion.

2. Competency framework (RALF) will be assessed in each module (20%) and supports student led choice and consideration of career aspirations.
3. Design for flexibility and choice– adapt the task and brief as business contexts change
4. Intellectually stimulate, build **confidence** and capability in students
5. Supports ongoing talent showcasing – tested with industry
6. Designed for scalability so that feedback turnaround time is achieved
7. Designed to reduce authenticity issues
8. Designed to increase pass first time rates while improving quality of submissions

There will be three components in our approach to assessment so that all students will complete:

- A live/verbal element (20%)
- A main written report element (60%)
- Competency framework (20%)

All elements of assessment must be submitted and passed for students to pass the module.

A variety of assessment methods are employed across all units. They include formative and summative assessments such as presentations, portfolios, learning journals, reports, peer assessment, live briefs, and external reviews. These methods encourage you to critically reflect on and build your learning and progress.

Formative feedback is given at the end of each term and students will receive ongoing advice and guidance (feed forward) alongside a critique against learning outcomes and assessment criteria. At the end of the unit summative assessment will provide conclusive feedback in response to an online submission of the assessment requirements for the modular units for this course.

The Ravensbourne Advanced Leadership Framework is embedded into all assessments to enable students to reflect on their growing competencies as they

Field Trips & Visits: Optional trips for final projects, subject to PG Competency Framework progress, attendance, and visa regulations.

The course integrates PSRB engagement, industry partnerships, and real-world learning to enhance employability in engineering management.

A competency framework known as the Ravensbourne Advanced Leadership Framework is central to all PG Business courses. This framework is reviewed each year by industry practitioners to ensure it reflects global employer needs. The framework is provided to students as a collection of contemporary business, technology and creativity skills, attributes and competencies that they can select from to develop and build on throughout their course gaining digital badges to show their achievements

Where field trips and visits are offered within the course these are not compulsory and may be subject to a financial contribution by the student. In instances where overseas trips are involved these will not be compulsory and the student will be responsible for ensuring appropriate visas are in place and requirements complied with.

progress through the programme. The first modules include a diagnostic and the final project a reflection on how far competencies gained support their graduate careers velocity.

Annually the course team will work with an industry panel in order to ensure that specific assessment briefs are in line with industry expectations and tasks set are opportunities for students to showcase their capability.

Course Structure

Module Code	Module Title	Shared Module	Mandatory / Elective	Credits
Level 7				
ENM25701	Evidence Based Management Decisions		Mandatory	20
ENM25702	Contemporary Management Strategy		Mandatory	20
ENM25703	Sustainable and Digital Transformation in Projects	x	Mandatory	20
ENM25704	Leadership and Management	x	Mandatory	20
ENM25705	System Design and Life Cycles Management for Engineers		Mandatory	20
ENM25706	Risk, Project and Resource Management for Engineers		Mandatory	20
BUS25707	Final Project		Mandatory	60
			Total	**180**

Learning Hours

Learning Hours (per 20 credit module excluding the Work Placement)			
Staff – Student Contact Hours		Independent Study Hours	
Formal Scheduled Teaching	36	Independent Study	164
Total			200

Course Regulations

Entry Requirements
[Set out the specific course entry requirements, including English language requirements.] A lower second-class honour (a 2:2, or equivalent non-UK qualifications) or higher in a relevant subject, or an equivalent professional qualification in a related subject. Students applying directly from an undergraduate degree course without experience or professional practice must be able to demonstrate a good knowledge of the chosen subject area. In order to be eligible for this course, students will need to be a competent speaker and writer of English. If they require a Student Visa an IELTS or equivalent English language qualification, which demonstrates a minimum of 6.0 (with a minimum of 5.5 in each sub test) or CEFR Level B2 in each component will be required in line with the latest University **English Language requirements**

Accreditation of Prior Learning (if applicable)

Applications are welcomed from those who may not possess formal entry qualifications, mature students, those with work experience or with qualifications other than those listed above. Such applicants should demonstrate sufficient aptitude and potential to complete the course successfully. Applicants will be assessed at interview in accordance with Ravensbourne's Accreditation of Prior Learning Policy and Procedure and Student Transfer Plan.

Conditions for Progression

Students will be deemed to have passed a module if they achieve 50% which is the minimum pass grade for postgraduate courses. Some modules, e.g. electives, use Pass/Fail grades and no marks are awarded. Pass/Fail grades are not used in the calculation of classifications for awards.

A student who has passed all assessments to date but has not yet reached the end of a level (or stage) will be permitted to proceed into the following term by the Interim Assessment Board.

Reassessment of Failed Elements

Failure or non-submission in any assessment will result in a **Fail grade** for the component and module.

A student shall be permitted **three attempts** at each assessment; one first sit and two resits.

Where a student successfully retrieves an assessment failure, the grade for the assessment will be capped at 50% (postgraduate) (except where Extenuating Circumstances have been approved).

Conditions for the Granting of Awards

A student who completes an approved course of study, shall be awarded **MSc (Hons) Engineering Management**

Those students who exit the Course without completing it may be entitled to exit with an award of either a:

1. **Postgraduate Diploma of Higher Education in Engineering Management** provided they complete an approved course of modules and the learning outcomes for such award as set out in the Course Specification.
2. **Postgraduate Certificate of Higher Education in Engineering Management** provided they complete an approved course of modules and the learning outcomes for such award as set out in the Course Specification.

Any derogation(s) from the Regulations required?

N/A	
Student Support	https://www.ravensbourne.ac.uk/student-services
Assessment Regulations	https://www.ravensbourne.ac.uk/staff-and-student-policies

Course Learning Outcomes	CLO1	CLO2	CLO3	CLO4
Level 7				
Evidence Based Management Decisions	X	X	X	
Contemporary Management Strategy	X	X	X	X
Sustainable and Digital Transformation in Projects	X	X	X	X
Leadership and Management	X	X	X	X
System Design and Life Cycles Management for Engineers	X	X	X	X
Risk, Project and Resource Management for Engineers	X	X	X	X
Final Project	X	X	X	X

Course Diagram

Semester 1	Semester 2	Semester 3
ENM25701 **Evidence Based Management Decisions** 20 credits	**ENM25704** **Leadership and Management** 20 credits Or **ENM25703** **Sustainable and Digital Transformation in Projects** 20 credits	**BUS25707** **Final Project** 60 credits
ENM25702 **Contemporary Management Strategy** 20 credits	**ENM25705** **System Design and Lifecycles Management for Engineers** 20 credits	
ENM25703 **Sustainable and Digital Transformation in Projects** 20 credits Or **ENM25704** **Leadership and Management** 20 credits	**ENM25706** **Risk, Project and Resource Management for Engineers** 20 credits	

Please note that not all modules will run in every delivery period hence alternating first and second semester modules.